

ABSTRACT

A decoder, encoder and corresponding system are disclosed for providing fast Forward Error Correcting (FEC) decoding and encoding of syndrome-based error correcting codes. Three-parallel processing is performed by elements of the system. More particularly, in an illustrative embodiment, a decoder performs three-parallel syndrome generation and error determination and calculations, and an encoder performs three-parallel encoding. Low power and complexity techniques are used to save cost and power yet provide relatively high speed encoding and decoding.